



# The Boston Kugel

## The Boston Kaypro Users' Group

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## A Revitalized WordStar for CP/M Arrives

*How it stacks up to its predecessors:  
WordStar 3.3 and NewWord*

by Alan Chapman

I have a love-hate relationship with WordStar. I love what the program can do; I hate the way it does it. So when MicroPro announced — at long last — an updated WordStar for CP/M that promised major changes, I was ready to lead the cheering section. When the CP/M version of WordStar Release 4 arrived, I ripped open the package with such fervor I almost destroyed the disks. After almost three years since the last significant improvement in CP/M word processing, I had almost given up hope that we would ever see one. NewWord was the last, and it enhanced WordStar 3.3 with some neat features — undelete, imbedded rulers, a built-in mailmerge, easier customizing, and better printing control. But it was still basically WordStar: slow, cumbersome and keystroke intensive.

Once mastered, WordStar is bearable. When patched for speed, customized and enhanced with a keyboard macro program (i.e., Smartkey or Xtrakey), it becomes a darn good word processor. But customizing WordStar 3.3 is not for the faint-of-heart. The process is complex, there is no documentation to show the way, and it is fraught with pitfalls.

WordStar 4 is a mixed bag. It is really an enhanced version of NewWord 2.1, which MicroPro acquired. While it greatly en-

hances WS3.3, it only adds a few features to NewWord. It also has a couple of drawbacks.

### Hoorays!

The most significant improvement is in the installation process. WordStar 4 divides installation into two programs: WINSTALL, which simply installs the terminal and printer, and WSCHANGE, which deals with all the default settings and other variables.

WSCHANGE intelligently guides even the relative novice through a wide range of customization items easily and understandably, if slowly. It is fashioned after NewWord's installation program, but is more extensive. It is slow and layered (to turn the help menus on/off, for example, you must pass through three levels of menus), but it gives you the flexibility that was previously available only to the expert patcher. It even has its own help file to explain some of its more cryptic entries.

WSCHANGE also allows you to reconfigure the numeric keypad to any single keystroke functions. You've always been able to do this with the CPM CONFIG program, but that means mucking around with the operating system — a process that is scary for many.

For you inveterate patchers, a word of caution. Data addresses in WS 4 are different from previous versions. Most (but not all) User Area Labels are the same and patches which designate them should work, but test them on a COPY, not your master. You'll

**Continued on page 14**

## Meeting Schedule

### Members' Show and Tell Night (CP/M and MS-DOS)

Tuesday, December 8th, 7:30 p.m.

An early Christmas celebration. Several Boskug members will tell how they use their computers, interesting applications they've found, unusual computer services or utilities, or innovative solutions they've discovered to their problems.

Noted Boskug impressario Karen Rockow is organizing the evening, which will include Willie Lockeretz discussing strange and unusual uses for spreadsheets, Bob Freed discoursing on

adventure-type games, John Anderson on why you should not junk your CP/M computer, and Adam Heath will describe some software and hardware that might lead you to consider getting a Macintosh. There have been rumors of athletic competitions like floppy disk flipping and speed typing contests. The latter will depend on the availability of both CP/M and MS-DOS machines. If you can provide one, give Karen a call at 354-0214. We'll also have a flea market. Give Karen a call for more information. Do you have a FUNNY computer story? We could use a few laughs. The December meeting starts promptly at 7:30pm. Be there!

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#### MEMBERSHIP INFORMATION

BOSKUG, the Kaypro Users Group of the Boston Computer Society, is a volunteer group of Kaypro owners who have banded together to share information and solve problems related to their computers, accessories and software. Boskug meets on the second Tuesday of the month at the Minuteman Regional Vocational Technical School, Rt. 2A, Lexington, just west of Rt. 128, near Hanscom Field. Programs include lectures, panels, and open-ended discussions. Meeting notices are carried in the BCS monthly CALENDAR and in its bimonthly magazine, UPDATE.

To join BOSKUG, write the Boston Computer Society at 1 Center Plaza, Boston, MA 02108, or call (617) 367-8080. If you live more than 75 miles away and wish merely to subscribe to The Kugel, send \$15 for a year's subscription to BOSKUG, 27 Howland Rd., W. Newton, MA 02165. Foreign subscriptions: \$20. Please send change of address information to the BCS; enclose your old mailing label.

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# Contents

<b>A Revitalized WordStar</b> ..... 1	<b>The Sysop's Column</b> ..... 6
by Alan Chapman A professional takes a hard look at WordStar's long-awaited CP/M offering.	Adam Heath on the philosophy of telecommunications and the problem with online jerks.
<b>Meeting Schedule</b> ..... 1	<b>Notes From a Strange Land</b> . 8
Boskug's December meeting will offer a look at how members use their computers. It also holds the promise of fun and games.	Michael Spampinato on beer, software, and, of all things, an Amiga.
<b>Meeting Notes</b> ..... 2	<b>Supercharge DataStar</b> ..... 10
Secretary Mitchell Wade synopsizes the September and October Boskug meetings.	by Hal Vogel Try SuperSort to speed up an under-rated CP/M database.
<b>The Third Time Around</b> ..... 3	<b>Useful Utilities</b> ..... 11
by Nat Weiner A long-time Boskug member reviews how he ended up with the computer he now has.	David Veinot takes a look at the CP/M programs XAMM and EDFILE.
<b>Panasonic's KX-p 1092I</b> ..... 4	<b>Classifieds</b> ..... 14
Melvyn Halbert takes a look at a new printer and likes what he sees.	

## Meeting Notes

*compiled by Mitchell Wade*

### From the September meeting:

Kaypro has a new laptop, the 2000 Plus. Brighter screen technology, full EGA support, V20 processor, \$2800. Adam Heath is organizing a group buy for 2400 baud modems.

BCS wants computer businesses to rent space in its new headquarters building, which would be much larger than the single floor version previously pictured. Rumored sites include Kendall or Central Square in Cambridge or along Route 128.

The Kirstein (business) branch of the Boston Public Library conducts on-line searches for free; usually takes around 24 hours.

Jim Welch from Micropro New England demonstrated Wordstar 4 — actually an enhancement of NewWord. Members get ten-dollar discount: CP/M or MS-DOS for \$79 + \$5 shipping + tax. Mention Boskug group buy, send in serial number or 1st page of manual from any version, any format of Wordstar or Newword. (800) 227-5609. Includes 90 days of free technical support; Jim Welch (229-2870) will also answer tech questions.

### New in the MS-DOS library:

**NARC** — menu-driven de-archiving program that handles all forms of squishing.

**FIXFILE** — Easy ASCII/Hex editor.

**CASHTRAK** — Menu-driven home accounting program with good reputation.

**PR** — File printing utility, written by Michael, with extensive options, features, and customization imaginable.

### New in the CP/M library:

**BRADFORD** — public domain version of Fancy Font. Lots of BBS support; whole libraries of fonts being released. Disk #134.

**SCRIVNER** — MailMerge functions with sophisticated mathematical macros. For generating invoices, etc. #401.

**WS3330.DOC** — all known patch points for Wordstar, plus Superzap, an easy patching program. #136

**VDE26** — Very fast, somewhat dangerous text editor much expanded from VDO.

### From the October meeting:

At November meeting, Mike Holmes, longtime member and professional database consultant, will talk briefly about using Clipper and Dbase in MS-DOS; answer questions and troubleshoot code in

**Continued on page 14**

# The Third Time Around

by Nat Weiner

I have now owned and used computers for almost five years, which is not a very long time as the world goes. It is astonishing to see how much my equipment has changed in so short a period. At the same time, it is interesting to note that, except for certain occasional applications, my original equipment could do the same things, albeit less quickly and less elegantly.

I thought of these things over the past few months while I went through another of what I call the "equipment cycle", a major change in my computer equipment. It was my third such cycle. Perhaps my experience will help some readers going through their own equipment cycles.

My first computer was a Kaypro II bought, along with an Okidata 93 printer, in April of 1983. However, I have to start this narrative with my first non-cycle. By 1983 it had become evident that a computer could be a serious help to me as a single practitioner lawyer. Besides, I have always been fascinated with advancing technology. Back then the IBM PC with two floppies and 256k of memory was the mainstream. It was also expensive, four grand more or less, limited by the available software which were mostly upgraded CP/M products, and you still had to pick out and buy software. (Wordstar was considered the quality word processing program for DOS, cost over \$400, and ran better in CP/M.) The leading edge was typified by a machine and company long since, as we say, "of blessed memory." The company was Eagle and their fancy new 1600 machine was an "almost compatible" PC clone with a higher speed 8086 processor, the magic of a 10 meg hard disc, a weak software bundle, and a five grand price tag.

At the bottom edge of the mainstream (ignoring some really funny machines best fully forgotten) was a plastic jobby with a tiny screen known as an Osborne, a CP/M "transportable" that had been a market sensation despite some serious limitations. The Osborne hit big because of its transportability, its software bundle and a \$1795 price tag that, except for a printer, (modems were hardly known way back then), put you in business.

My initial reaction was to go for the big solution, the machine that would last me a long time, (the one with the gizmos), the Eagle. Indeed, but for the owner of a small systems shop out in Hopkinton, a super nice and honest guy possessed of more conscience than greed, I would have done precisely that, and bought an expensive daisy wheel printer along with it.

Confused with the many decisions involved in buying a DOS machine, hesitant about investing big money without really knowing what I was doing, and finding the Osborne screen too small, I might have done nothing, but I found a solution.

Following in the tracks of Osborne, Kaypro had introduced the Kaypro II, an Osborne with a nine-inch screen and in a tin can instead of a plastic one, also at \$1795, and also with what was supposed to be a full bundle of software, (and was, if you ignored the quality of some of it). The Kaypro, like the Osborne, used the CP/M operating system, "the business standard" or so I was told, so I would always have lots of great software to pick from if I wanted to buy some. I think someone mentioned something about disk and terminal compatibility, but if they did it didn't mean anything to me, not then.

I bought the Kaypro, and at pretty close to list price, i.e., I got a small discount on the Okidata 93 dot matrix printer I finally

settled on, one of the first of the dot-matrix printers to offer something called "near-letter quality". I was in business.

My luck was running good, real good. I lived in the Boston area, some kid had started a computer "society", that society had "groups" and one of the groups that was really flourishing was the Osborne group. Kaypro, a Johnny come lately, didn't yet have its own group, so the few Kaypro owners would go up to the Osborne meetings. Well to make a long and separate story short, at the very first Osborne meeting I went to, there were about a dozen Kaypro owners, and a couple of the old hands, Lockwood and Waters, people who had been to previous meetings, suggested that Kaypro set up its own group.

Through neither fault nor skill of my own, but with much luck, in my first equipment cycle, I managed to avoid the disaster of spending a lot of money on a bad machine. Instead I bought a very nice and useful machine, for the Kaypro was very much those things. I also lucked into membership in BOSKUG, without whose aid I might still be trying to learn how to turn the machine on, as my dealer disappeared almost as soon as he cashed my check.

Buying the Kaypro was a fine decision for the time and circumstances. But time and circumstances change, sometimes rapidly. And so began my second equipment cycle.

My Kaypro rapidly became very productive, so much so that in about a year I was already beginning to run into limitations. I needed disk space. I also needed access to programs and services then becoming most readily available in the mushrooming DOS area. Although it was clear the trend was to DOS, I considered buying a Kaypro 10, Kaypro's hard disk CP/M machine. It was transportable, had the disk capacity I needed, and was compatible with the software I already used. On the other hand it was relatively expensive compared to other alternatives, and already of yesterday's technology. Besides, it seemed that dark clouds were overtaking Kaypro Corporation's short day in the sun.

Being one who likes both quality and value, the IBM PC still didn't have much allure. However Compaq had established that a true compatible could be made. Some "clone makers" were beginning to get their acts in order. Good, really compatible clones, were coming into the market at attractive prices.

Again luck played a part. Even before I bought my Kaypro, I had done a highly specialized consulting project for a very successful young fellow in Canton, Massachusetts, a fellow who, as someone put it, had gone through three successful business careers before he was thirty. By 1984, this fellow was running a company called Leading Edge Products, and so it was with more than passing interest that I noted that he had begun importing, and selling under the Leading Edge label, a PC clone made by Mitsubishi, a major Japanese company with a strong reputation for competence and quality.

By late 1984, when I was serious about buying a new machine, the Leading Edge M, as it was known, had already received several favorable reviews. In addition, Leading Edge bundled in a good word processor, a high speed 8088-2 7.16 mhz micro processor, a memory board, clock, hard-disk and the rest, all at a very aggressive list price of \$3,000, a price that was heavily discounted to make the machine an outstanding combination of quality and value for the market as it then stood. The final kicker was that Leading Edge provided a full year guarantee and even offered unlimited phone support through what was for me a local call.

Continued on page 15

## Hardware

### Panasonic's KX-P1092i Printer

A Hardware Review  
by Melvyn L. Halbert

#### Description

The KX-P1092i printer by Panasonic is a 9-pin dot matrix printer rated at 240 characters/second in draft mode (pica or elite) and 48 c/s in either of its two near-letter-quality (NLQ) modes. The draft-mode characters occupy a 9-row by 11-column matrix, with either the top or the bottom 8 rows available for printing each character. In the NLQ modes, the matrix has 18 rows (of which the top or bottom 16 can be used for a given character) and 23 columns. User-generated draft and NLQ fonts may be downloaded. Dot graphics density is selectable between 60 and 240 dots/inch horizontally; the smallest carriage roll possible is 1/216 inch vertically.

This printer accepts single sheets of paper or continuous fan-fold paper from 4 to 10 inches wide. It comes with a push tractor, so there is no need to eject a blank sheet every time you want to tear off the printed output. The paper feed can be reversed; by commanding platen roll up or down, full-size or downloaded special characters may be used as subscripts or superscripts. The 1092i comes with a 6 kilobyte buffer; a 32 kb buffer is optional. A cut-sheet feeder is also available. I have neither of these options. Panasonic provides a two-year warranty on parts and labor; return transportation from their service centers is free of charge.

#### Compatibility

In its "Standard" Mode, the 1092i is Epson FX compatible, i.e., it will accept any command or downloadable font that an FX-80 will accept. It seems to be compatible also with the FX-85. However, the new double-height mode on the FX-86e is not available on the 1092i. In its IBM mode, obtained by flipping a DIP switch, the 1092i acts exactly like an IBM Proprinter. The IBM graphics/Greek/math character set is available in this mode only.

The front-panel controls are: on-line/off-line button, line-feed and form-feed buttons (both active whether or not the printer is on line), rotary switch for form-length selection, and print-mode selector.

The print-mode selector button offers seven pitch/font combinations: Draft 10, 17, or proportional space (PS); Courier NLQ 10,12, or PS; Bold PS NLQ. This limited selection greatly under-exploits the printer's capabilities. I prefer to run a program to set the printer options (or have my word processor set them automatically). The many public-domain setup programs that exist for the FX series should do most of what is needed for the Panasonic. However, to take advantage of the additional features offered by the 1092i and not the FX, I wrote my own setup program. While I was at it I wrote one also for the IBM Proprinter mode. These are for CP/M and are available in PAN1092I.LBR on the BOSKUG RCPM system and elsewhere.

#### Features

The KX-P1092i offers a larger choice of fonts and pitches than does the Epson FX series. The fonts available are a good-looking draft font, a half-height super/subscript font of high quality, and

two NLQ fonts with serifs. One of the NLQ fonts is a handsome font resembling the Courier typeface seen on some older typewriters. The other is a pleasing boldface PS font. All fonts may be printed in roman or italic.

User-defined character sets may be downloaded to the printer and selected by appropriate commands embedded in a document. Unlike the FX series, the 1092i accepts NLQ as well as draft characters. The buffer can hold up to 256 draft characters or 65 NLQ or 99 draft + 40 NLQ.

Primary pitch selections on the 1092i are 10, 12, 15, and 17.1 characters/inch, plus proportional spacing based on the 10/inch size. The double-width command can be applied to any of these, giving 5, 6, 7.5, and 8.5 characters/inch. Any font can be printed at any pitch (except for PS in draft or Courier NLQ; in Bold PS NLQ, any pitch can be set after the font has been selected).

While on the subject of pitch, I should interject a warning to people considering purchase of an Epson FX-86e. This model, unlike the FX-85 or any other dot-matrix printer that I know of, achieves its 12 pitch by omitting some of the blank space between characters; the letters themselves are exactly the same size as for 10 pitch. Text printed in this mode presents a disagreeable appearance and is difficult to read.

Like the Epsons, this printer has a hex dump feature that prints out the ASCII codes for the commands and the data that it is being fed. This can be enormously helpful for debugging.

#### Overall Impressions

I like my KX-P1092i very much. Before I bought it, I collected print samples from a number of competing makes of printers in its price range. I found the Panasonic to be superior in print quality to all of them. A similar conclusion was reported by G. A. Stewart and J. M. Tazelaar in a comparison of 53 printers published in the April 1987 issue of Byte magazine. Their panel of 23 Byte staff members rated the 1092i second of all printers for NLQ print quality; the only one rated better was a \$2000 24-pin model. The article also gives data on noise level, throughput, etc.

The machine has a plastic case, like nearly all inexpensive printers these days, but it appears sufficiently sturdy. The printhead is driven by a steel cable, not a plastic belt. In the two months I have been using it (to print about 1000 sheets of paper), it has never jammed or caused me any trouble whatever. The instruction book is complete and well organized.

There are a few negative aspects. There is no front-panel control for Set Top of Form. In Standard (FX) Mode there isn't even a software command to do this. The instruction book says the way to do it is to switch off the power and switch on again. So if you have set margins, typestyles, or downloaded a font, you will lose everything. I believe all the Epson FX models have the same shortcoming. Also, the DIP switches are deep down under the area where the printhead rides back and forth, not nearly as convenient as on some Epson FX models. Fortunately, access is from the top and requires no tools, only easy removal of a flip-top cover. Additionally, I had some trouble installing the ribbon cartridge initially — it tends to catch on the top of the printhead and bunch up improperly. When I put my glasses on before snapping the cartridge in place, the problem disappeared. And finally, although the 1092i has FCC approval, it interferes with a weak channel on both of my TV sets.

#### Ribbons

Panasonic ribbon cartridges are often available locally for  
**Continued on page 13**

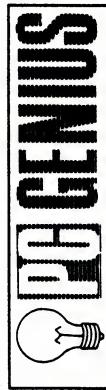
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# The Sysop's Column

by Adam Heath

*"Being a Sysop is at the same time the most frustrating, time consuming, anger-ridden, challenging, intensively gratifying, and personally profitable thing you may ever be. It takes one hell of a person. Mark my words."* -- Scott Watson (Author of Red Ryder)

When I first started using computers, I was mainly interested in word processing. I have lousy handwriting and I'm a mediocre typist. I used to write the first draft of papers in long hand, then type out my drafts, rewriting as I typed. Even though I used erasable paper and countless erasers, my papers were always returned with a lot of red ink and "spelling?" notations in the margins. Word processing made writing less of a chore and more of a joy. I could concentrate on the content of my writing, and let the spelling checker tackle the typos. Now I won't write anything of import, unless I can use a computer.

I thought that word processing was the cat's pajamas, until I discovered computer-mediated telecommunications. I saw my first modem when I was interviewing for a job at the Mass Mental Health Center. Control Data Corporation had donated two computers and a modem to research the use of computer-aided instruction in the rehabilitation of psychiatric patients. Fortunately, I got the job and I soon found myself staying after work to explore the PLATO system.

I quickly discovered electronic mail facilities, on-line conferencing, and message boards. PLATO caused a paradigmatic shift in my thinking about computers. Until I used PLATO, I thought of computers as word processing and game machines. After using PLATO for a few nights, I realized that computers are a powerful tool for interpersonal communications. This was especially important to me because I had just moved to Boston and I was working evenings and weekends. I soon started meeting more people via computer by any other means.

To borrow a phrase from Stewart Brand's excellent book "The Media Lab: Inventing The Future at MIT," computers allow "communication out of real time," meaning that "...the individual human schedule prevails over the institutional." (Viking, 1987, ISBN 0-670-81442-3.) Problems of mundane real time communications such as time of day, and geographic location become immaterial. We no longer have to be in the same place at the same time or connected by radio waves or phone lines in order to conduct a two way conversation. We can conduct a meaningful exchange solely by computers and modems, without ever meeting in person. You can leave a message to me on the computer at any hour of the day or night and I can receive and respond to the message at my convenience.

A group can communicate by means of centralized computer services like PLATO or the Boskug RCP/M in order to share important information or social chit-chat. Groups can also communicate across international boundaries via commercial services like Delphi or networks of micro computer systems like FidoNet. Conferences can be conducted without the participants being physically together. This freedom from the constraints of the mundane empowers the individual. In many ways the BBS is the electronic press of the future, and as A.J. Liebling said "Freedom of the press belongs to those who own one." (Starting your own BBS will be one of the subjects of my next column.)

In a sense there are two Boskug meetings. There's the "real

time" Boskug meeting that meets on the second Tuesday of every month in Lexington. There is also a Boskug meeting that is conducted "out of real time." The former meeting is attended by members who have cars and live close enough to Lexington to make the drive. The latter is attended by members who have modems. Since the second meeting occurs "out of real time," it is available 24 hours a day, 365 days a year, and is attended by members from all over North America. (Although I'm still waiting for our first overseas caller.)

As a sysop I function as facilitator of an electronic meeting house. In my mind the existence of the Boskug RCP/M can only be justified by its usefulness in facilitating communications amongst members in the times between our monthly real time meetings. I devote time and energy to the board because I enjoy communicating with people about computers and computer-related topics. I have learned a lot from three years of sysoping on the various incarnations of the Boskug RCP/M.

A psychologist and educator by vocation, and a computer user by avocation, I am fascinated by the whole issue of BBS etiquette or "modem manners." For instance (in case you've ever wondered) you throw rice at an on line wedding by holding down your apostrophe key, a cogent fact that isn't mentioned in "Emily Post on Weddings." (Harper and Row, 1987, ISBN 0-06-080812-8) Many modem owners are unaware of this, which is perhaps excusable ignorance, considering the paucity of on-line weddings. However it is inexcusable that many modem owners are unaware of even the most basic aspects of BBS etiquette. I'd like to pass on a few pointers about BBS etiquette that should prove helpful the next time you are engaged in out of real time communications.

The most important thing is that when you call a BBS you are a guest on someone else's computer and you should behave accordingly. If you are rude at a party, you will not be invited back by your host. If you are rude on a BBS you will find that the sysop may take a number of punitive measures ranging from a friendly warning to a complete loss of access privileges. The average caller has to work hard to be rude or offensive, but unfortunately it takes just one or two abusive callers to ruin a BBS for everyone. Many good public systems have closed their doors and become private systems because of abusive callers. The ideal of the free and open exchange of information via BBS systems has been sorely tested by callers who take advantage of open systems. I deplore the trend towards privatization of BBSs, yet I am entirely sympathetic towards sysops who have suffered at the hands of abusive and malicious callers.

Another important consideration is that each BBS has its own culture and its own rules of behavior. I strongly urge you to read all of the informational files that you can find whenever you call a new BBS. I always capture all text to a disk file when I call a new BBS, and I make a point of reading all the help files. There is nothing more annoying than dealing with a user who hasn't taken the time to read the help files. Most sysops like to help callers, particularly telecommunications novices, as long as they make a reasonable effort to help themselves by reading all of the help and policy files. Don't let this discourage you from asking for help from a sysop, but be sure to check the help files first.

Finally I can't overemphasize the importance of knowing how to say goodbye to a remote system. How you log off a system can be as important as how you behave when you are using a system. All BBSs have a specific log off procedure that should be followed. Usually this a menu choice, most often the mnemonic G for '<G>oodbye, log off this system.' RCP/M's also have a program

called BYE that directs all input from the modem to the BBS program or the operating system. On the Boskug RCP/M you can log off from the RCP/M area by typing BYE and pressing return. Failure to log off a BBS correctly can cause the system to crash, rendering it inaccessible to subsequent callers and destroying message files and user logs. Often, information about your most recent call will be lost should you fail to log off properly.

A classic ploy that malicious callers use is unexpectedly breaking the phone connection without logging off in an attempt to crash the system. This is referred to as a 'carrier drop'. You may be mistaken for a malicious caller if you drop carrier instead of signing off properly. Most systems keep track of carrier drops and the sysop may take action against repetitive offenders.

Accidental carrier drops are often caused by hardware problems like loose cables or by call waiting. Audible clicks that signal a waiting call last long enough to completely interrupt the modem to modem connection and cause a loss of carrier. You can

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*"putting up with leeches is the price we pay for free and open access to a BBS system."*

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disable call waiting on outgoing calls. The procedure for doing this varies from exchange to exchange, but often consists of dialing \*70 or 1170 before dialing the number that you are calling. Your telephone business office can tell you more about this. The best way to eliminate the hassle of call waiting is to cancel the service or install a second line without call waiting. (In a true emergency, your loved ones can dial 0 and ask for an 'Operator interrupt' to have the operator break into a busy line.)

There is a category of callers colloquially referred to as 'twits,' or 'weenies.' Twits provide a perfect example of what not to do on a BBS. If you keep twits in mind as a negative role model, you should be all set to be an exemplary BBS user. The typical twit is an adolescent male with a 300 baud modem. The twit population increases during the holiday season when many a young twit receives his first modem. Twits also think that BBSs are great places to meet women.

Twits start on the wrong foot by using handles instead of real names, ranging from 'Genghis Kahn' and 'Rodney Christ' to outright obscenities. They also leave insulting messages to the sysop when they find out that they don't have full access to the system. If they have full system access, they leave insulting messages to other users. Such behavior is one reason why many boards require user validation before new users can leave public messages. Twits are those wonderful folks who upload programs that reformat the BBS's hard disk when the sysop runs them for evaluation purposes. Finally, twits offer to trade pirated software or illegally obtained telephone access codes.

Fortunately, few twits have called the Boskug board and none have damaged the system in its current incarnation. I delete any callers who don't leave their real phone number, city, and state. I verify all users by calling information; if a user's number isn't listed, I dial him directly. In the end I purge twits from the user log.

Unfortunately we have some callers on the Boskug BBS who act like twits by leaving messages listing telephone access codes or offers of trades for pirated software. Private e-mail is an illusion on BBSs, because all private messages will be read by the sysop as well as the sender and the recipient. Most sysops read all of the messages on their BBSs and delete any dubious messages. My policy is: "Illegal activities will not be tolerated on this RCP/M BBS!" I implement this policy by deleting offending messages and, if necessary, deleting the account of the offending user. Usually, I give him the benefit of the doubt and suggest they cease and desist before I delete their account.

There is another category of callers known as 'habitual downloaders,' 'freeloaders,' 'lurkers,' or 'leeches' who call a BBS just to download software. Often they read the message base, to find out about new software I suppose, but they never leave any messages. Although they never upload any software or give the sysop any money to support the BBS, they tie up the BBS for as much time as they are allowed per day.

Some BBSs handle leeches by allowing download access to subscribers only. Other systems base access levels on the ratio of uploaded to downloaded files. There are numerous other ways of dealing with leeches, but all solutions disadvantage either the sysop or the other callers of the BBS. My personal view is that putting up with leeches is the price we pay for free and open access to BBS systems. Non-members have a maximum of 45 minutes of access per day on the Boskug BBS, and I may reduce non-member access time if members are having difficulty getting through to the BBS. I firmly believe that users who support a BBS with message, money, or uploads should not be penalized by the presence of freeloaders.

The best BBS users, from a sysop's point of view, are users who support the board in one of several ways. All sysops appreciate financial donations. Even a small donation goes a long way in winning the sysop's good will. Many sysops pay the costs of running their BBS out of their own pockets, and donations make a big difference in the sysops' ability to continue. Numerous systems go off line due to lack of funds for a phone line or maintenance. Ideally, a sysop would like to have the BBS pay for itself, although it is a rare BBS that is self-supporting.

Uploads are another way to support a BBS. Sysops are always looking for new files for their system, yet often they don't have much time to call other BBSs because they are so busy running their own. I really appreciate people who take the time to upload files; the Boskug BBS is set up so that time spent successfully uploading a file isn't counted as time spent on line when the BBS calculates your time limit.

Finally, you can support the BBS by being active in the message base. When you sign on to a new system, introduce yourself, and let the sysop and other callers know who you are and why you are calling. When someone asks a question and you know the answer, take the time to respond.

Sysops put in a lot of hard work to keep their systems running. Although they don't ask for much, they do like to be appreciated for the work they do. We all owe a tremendous debt to the many sysops who have made the ideal of the free, on line, "out of real time" exchange of information a reality. If it weren't for the work of many pioneering sysops, our group wouldn't have an electronic meeting place.

*Adam Heath is still trying to figure out how to run CP/M80 on his Macintosh, and has recently put an "MS-DOS: Just say No!" bumper sticker on his refrigerator.*

# Notes from a Strange Land

by Michael Spampinato

This edition marks a permanent departure from my MS-DOS column. While I love my MS-DOS machine, my interest in computers ranges far beyond just MS-DOS. I hope to share some of those interests with you in this column. I'm one of those strange people who think every computer has merit. It's unfortunate that the computer world has split into factions, with users attacking other computer systems with an almost religious zeal. Even with the vastly increasing numbers of installed computers, computer nuts are a minority and should stick together. Fortunately, corporate computerdom is, perhaps unwittingly, helping to bridge the computer-user gap (see MACVATION below).

Enough preaching, dummy. On with the show...

## "Don't Chop the Wood, Ma. Pa's Coming Home With a Load."

Let me offer a word of advice. Don't drink and compute. Actually, some of my most enjoyable computer sessions have sprung from the neck of an Aass Bock, Taddy Porter, or Celebrator. However, some of my messiest moments have also arisen under the hop's influence. At the very least, don't drink and then open up your computer. Here's why.

Those who have read my other columns know I like hardware; boards, chips, drives, and cables fascinate me. Usually, when I open up my computer, I am stable and quite sober. Bear in mind I do not drink to excess. Just a beer or two during a night's computing. A couple of weeks ago, I was really in the mood to hit the computer. I decided not to eat dinner but just bring a couple of bottles of stout to my computer room. Well, halfway through the first bottle I felt pleasantly, albeit moderately, jingled. I became a trifle intimate with my computer. I winked knowingly at the monitor. "Hey, kiddo, how's about my switching disks around?". I have two hard disks in my machine. Since they generate a lot of heat, and since I keep my computer on a floor stand, I decided to put the floppies in the bays under the hard drives. This would place the hard drives closer to the surface of the computer and help to dissipate heat. Well, the first beer was finished, the second opened, and my computer was laid bare. Removing and rearranging the drives was a snap. With a gleam in my eye I reassembled the computer, booted it, and watched a cloud of smoke waft languidly toward the ceiling. Immediately I shut everything off. I opened up the machine, cursing all clones for their weak power supplies. A few minutes of prodding and sniffing told me the source of the smoke was not the power supply but the hard disks. (Now here's a tip. Should you ever drink a tad too much and want to sober up quickly, try short circuiting a hard disk. Believe me, the alcohol will be driven from your system within seconds). Gently, lovingly, I removed the hard disks from the bay. The 20 meg seemed fine, but my heart sank at the sight of the 10 meg. I had left a loose screw sitting on top of the 10 meg's circuit board, effectively short circuiting it. Now I'm awaiting a new circuit board from MicroSci. The only good thing about this is it gives me the opportunity to install a circuit board on a hard disk, a first for me.

## Update News

Software Publishing has dropped Harvard Professional Pub-

lisher from their software line. Registered owners of Professional Publisher will be given a free copy of both Harvard Graphics (the latest version of what used to be Harvard Presentation Graphics) and PFS First Publisher. First Publisher is a rather nice low-end desktop publishing package that can directly import both Harvard Graphics and Harvard Presentation Graphics, as well as graphics and text from several other packages. Harvard Graphics is an absolutely dynamite package that offers a wide variety of easy to create graphs and charts. Its excellent presentation feature allows you to easily assemble a very professional slide show on your PC.

## It's About Time

Lotus Development, the last major developer to continue copy-protecting their products, will be removing the protection from 123. The new version, slated as Release 3.0, is due out on the shelves in a few weeks (months?). Lotus is also planning to remove copy protection from Symphony.

## On The Intel Front

Intel has embraced a EMS (Expanded Memory Spec) called L/I/M EMS 4.0. Benefits of the new spec include up to 32 megs of expanded memory, the ability to place both program and data code in EMS, and faster switching between applications when using Windows 2.0. The software will work with all Intel Above-boards. Intel is offering a free upgrade to registered users. Check your mailboxes.

## MacVasion

As more Macs become integrated into MS-DOS office environments, more DOS programs will be appearing for the Mac and more Mac programs will be appearing for the PC, allowing easy data transfer between the two systems.

Microsoft has dipped into the MacIntosh barrel to come up with two new products for MS-DOS users; EXCEL and WORKS. EXCEL, the premier Macintosh spreadsheet, has established a powerful base among serious MacBusiness users. WORKS, an integrated word processor-database-spreadsheet-graphics-tele-communication package (phew), has gained an excellent reputation among low-end MacUsers.

Early indications indicate that EXCEL needs a fast machine (80286 minimum) and LOTS of memory. WORKS is reported to be very impressive and should give packages such as ABILITY and FIRST CHOICE a run for their money.

Ashton Tate has reversed the trend by offering a premier MS-DOS program for the Mac. dBASE MAC is already shipping and initial response has been outstanding. It seems Ashton Tate has really got the MacInterface down pat.

## Emaxculated Headroom

I love cable television. I especially love computer-related fare. Max Headroom (Fri. 9PM Channel 5), used to be my favorite television show in the history of the CRT. Set "20 minutes into the future", the first six shows combined exceptional computer generated graphics with a twisty, complex story line, machine gun dialogue, and fully fleshed out characters. Unfortunately, the show became a victim of semi-good ratings. The network kept the show, but announced they would "tone it down" so it would appeal to a larger audience. Translation: Computer generated fluff. The plots have been reduced to a single storyline featuring sophomoric squabbles between the main characters.

## Data Base

### Supercharge DataStar with SuperSort

By Hal Vogel

DataStar (the MicroPro database management program that came bundled with most CP/M Kaypros) can deal with very large volumes. Its manual claims a capacity of over 65,000 records per file, which is good news if you have lots of entries for a file. It's not so good, however, when it comes time to sort (reorder) those records. DataStar can sort its own files. Even the large ones. But it's slow. It's so tardy that you can read each record as it flips on the screen during file maintenance, which is what DataStar calls its sorting and reindexing routines. (Editor's note: you can speed up DataStar's file maintenance by hitting a non-printing key like ESC or an arrow key. Although this tells the program not to write each record to the screen, file maintenance is still slow.) You can take a long lunch in the time it takes to sort a massive file. This is not a problem peculiar to DataStar. DBASE II, for instance, suffers similarly.

But if you're not hungry when it's time to sort a DataStar file, you don't have to go to lunch. Skip DataStar's file maintenance and use SuperSort instead. It is one of those other programs (SORT.COM) that usually came bundled along with CP/M

Kaypros (you can order it for \$69 from LifeStyle Software, 1299 4th St., #402, San Rafael, CA 94901).

SuperSort probably is CP/M's most versatile sorting program. It can do much more than what we'll describe here. It's fast, reliable, isn't complicated to learn — and works directly on DataStar files. Nothing has to be done to the DataStar (or WordStar/MailMerge) files for SuperSort to read and manage them.

SuperSort truly is super when compared with DataStar's inherent sorting ability. DataStar spent 2:20 reordering a 12K file of 145 records that had three of its 16 fields designated as key fields. SuperSort did it 85% faster. The reordering with SuperSort took 12 seconds. Making the index file (.NDX) consumed only ten seconds more. SuperSort's two-step file maintenance totalled only 22 seconds compared to DataStar's 140.

SuperSort is not difficult to use. It requires two steps. First the data file (.DTA) has to be sorted. Then its index file (.NDX) has to be remade. DataStar does this in one step.

DataStar performs file maintenance automatically when requested. With SuperSort you exit DataStar and tell SuperSort some things in the command line that DataStar already knows (from reading the form definition file). These command lines can be cumbersome and arcane to code; designing them can be a daunting experience.

However, a basic format can be used to construct these command lines. You don't have to begin from scratch. You don't even have to know why each element is there. All that's necessary is

**Continued on page 10**

### A Strange Land (continued)

The last straw came when Bryce Lynch, the young computer genius employed by Network 23, confessed to having been a "hacker" in his youth who broke into computer security systems. Hackers are not, repeat not, people who break into computer systems. Hackers are simply people who are into computers for the sake of the computer. What to do? When you can't trust Max Headroom, who CAN you trust?

### New - Q&A WRITE

Symantec, which has given us Q&A, a premier flat-file database, has sprung a surprise on the medium price word processing world with the introduction of Q&A WRITE. Q&A WRITE is destined to be the number one medium priced word processor, partially due to the limited number of mid-range word processors available. Most word processor's fall either in the low-end category (such as BANK STREET WRITER) or in the extremely competitive high-end market (Wordperfect, Multimate, Wordstar 2000 etc.).

### How Could I?

I have a new addition to my computer room. Last week I purchased an Amiga 500. This machine is incredible. Great graphics, multitasking operating system, unreal sound. I plan on using it to make computer videos (you can interface directly into a VCR). The Amiga can display up to 4096 colors on the screen simultaneously, and has resolution ranging from 320x200 to 640x400. The Amiga 2000 is an expandable version of the 500. The machine is capable of running MS-DOS programs via either an 8088 coprocessor or, get this, an 80286 coprocessor. With the 80286 setup, you can still take advantage of the Amiga's multitasking by running Amiga programs at the same time as a DOS

program. Speed is said to be identical to an 8MHz AT, and near 100% compatibility has been attained.

### A Neat Trick

A command stack is a buffer (or holding area in memory) that stores a certain number of previously issued DOS commands. DOS has a one command stack, that is, it remembers the previously input DOS command. Try this. Type DIR and hit return. Then hit the F3 key. You will see DIR appear next to your prompt. This is a live command. Hit enter again and you'll get a listing of files. You can edit the command easily using the cursor keys in conjunction with the INS and DEL keys. For example, when making a new directory you issue the command MD\DIRNAME (DIRNAME here representing whatever you want to name your directory). After entering the MD command, you can easily change to that directory by typing a C and then hitting the F3 key. The C you typed replaced the first character of the previously issued command that is being held in the stack. When you hit the F3 key you recalled the remainder of the command. You're MD\ has been changed to CD\. Experiment with this. You can hit the F# key and then cursor back and delete or insert characters on the displayed command. For example, say you enter DIR F\*.\* to find all files beginning with the letter F. If you then want to find all files beginning with the letters JO just do the following: Hit the F# key and you will see the command DIR F\*.\*. Backspace until you delete the F. Then hit the J key. Next, hit the insert key and type an O. Then hit F3. You're display will now read DIR JO\*.\*. While it sounds complex, it's actually quite intuitive after you get a feel for it. There are a lot of Public Domain command stacks that will save the last 10 or more commands you entered. They can be displayed all at once, edited, and executed easily. Look for a review of these in the next Kugel.

## SuperSort (continued from page 9)

being able to count spaces and fill in the blanks. That's the arcane part.

The cumbersome part is solved with automated batch files which speed running the individual SuperSort ordering and indexing functions and automatically execute them in sequence. Into these standard structures.

You don't have to fully understand SuperSort to know how to construct its command files. You have to know where the

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### *With SuperSort you don't have to go to lunch when it's time to sort a DataStar file.*

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variables are within the command structure that will do what you want done. Then you just plug in your own numbers and names and run it.

A SuperSort command line consists of two parts; the name of the program that will drive the process ("SORT," which runs SORT.COM) and the instructions for SuperSort to use. Here's a sample SuperSort command line for ordering a DataStar file;

```
SORT INPUT=270,CR-DELIMITED,SORT-FILE=MYFILE.DTA,OUTPUT-  
FILE=MY.DTA;KEY=#10,1,#4,25;EXCLUDE=FIELD 1,1 = OFFH;G
```

(Note: the above is typed all on one line)

Now the explanation: "SORT" triggers SORT.COM. The rest of the line tells SORT what to do. "270" after INPUT tells the length of the longest record to be sorted. You can quickly determine this using WordStar in non-document ("N") mode to examine the data file to be sorted. First set the right margin to some length that exceeds the length of the longest record, then run the cursor to the end of that longest record. Notice what number is after "column" on the status line at the top of the file. That's the number (plus one to be safe) to put in the space after INPUT=.

Another way is to add up all the spaces you have allocated to fields (plus one or so to be safe). Still another way is to generously guess. Intelligently guess what the longest record might be and add generously to that (you can be too long, but being short with this number can be fatal). In my example, 270 is about 70 more than the real length. I generously guessed, then padded the answer.

Just enter the next part (CR-DELIMITED). This identifies the method DataStar uses to separate fields and never will change. The next variable is MYFILE.DTA. This is the name of whatever your DataStar file is. MY.DTA is whatever you temporarily want the newly sorted file to be named (this later will be changed back to the name that DataStar was using for this file).

The last variable that needs to be inserted is the designation of key fields. These are the same as the key fields (one or more up to three) in your DataStar form. They are listed in the same order as in DataStar (i.e., the first key field is listed first, second one is listed second, etc.).

The number preceded by a hash mark (#) is the order of the field in your record. The first field in your DataStar form is #1. The last field in a fourteen field record is #14. The number following this (preceded by a comma) is the length of this field on your DataStar form. In our example, we have two key fields. The first key field

we designated in DataStar is the tenth one in line (#10). It has one space. The second and last key field is our fourth in line, which has 25 spaces allocated to it on the DataStar form.

Don't worry about the rest of the command line. This won't change. For your curiosity, this last part tells SORT to examine the first part of every DataStar record and exclude those where it finds a zero (i.e., records you've designated for deletion since the last sort). "GO" is SuperSort's command to execute instructions.

This command line can be abbreviated as follows:

```
SORT I=270,CR;SO=MYFILE.DTA;O=MY.DTA;KEY=#10,1,#4,25;EXC=FIELD 1,1 = OFFH;G
```

Notice that the only spaces in the command line occur after SORT, before "1,1" after FIELD and on either side of the equal (=) sign after "1,1."

This will sort the data file. Now we have to remake the index file so that DataStar can use the changed data file. Using the abbreviated form, we'll have;

```
SORT I=270,CR;SO=MYFILE.DTA;O=MYFILE.NDX,FIXED,KP;KEY=#10,1, #4,25, #1,2;G
```

You see some familiar identifiers and variables from our previous example. The INPUT length is the same, as is the field method separator (CR).

The SORT-OUTPUT (SO) file also is the same, but it isn't the same file as in the former (sort file) example. We took the original data (.DTA) file and sorted it into a file we called MY.DTA.

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### *SuperSort has built-in macro capabilities for automating command line entries.*

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DataStar is expecting to see the old file name used. So erase the old data file (MYFILE.DTA) and rename the newly sorted file (MY.DTA) to the old file's name (MYFILE.DTA).

The output file (O=) is the index file that DataStar expects to see (i.e., the data file name with the suffix .NDX). Additional instructions are issued for how the output file will be made (FIXED, KP). Don't concern yourself with what they mean. They'll never change.

The first part of the KEY portion looks the same as that part of the KEY section in the file-sort command line. And it is. We are dealing with the same two key fields (10th and 4th, in that order). However, another field ALWAYS needs to be added at the end of your key field listing. It always will be the same; #1,2. This goes back to field #1 and adds two spaces for DataStar's use. Even if one of your key fields already is #1, add this one at the end. You will have two #1 key fields listed. For example:

```
KEY=#1,6,#4,25,#1,2;G
```

The above shows two key fields (#1 and #4). The last key field entry is the add-on for DataStar status checking. Just remember to add "#1,2" after all your other key fields are entered, whether you previously listed something for a field #1 or not. Of course, this only applies when making the index file, not for reordering the data file.

Now you have both command lines ready for execution. The first one we discussed (to sort the data file) is executed first. When it is finished, you delete the old data file, rename the newly sorted data file to the old data file's name and run the index file routine (the second command line we discussed).

Continued on page 13

## Useful Utilities: XAMN AND EDFILE

by David Veinot

Have you encountered one or more of the following problems when using a CP/M Kaypro?

1. You get a "Bad sector on B" message
2. You accidentally save a file with invalid characters in the filename and then cannot access the file.
3. Somehow you get two files on a disk with the same filename and can only access one, which happens to be a previous revision of the one you want.
4. You accidentally start to format your WordStar data disk that has files on it that you don't want to retype.
5. You have a text file that is corrupted with non-text characters.
6. You see an article about patching a program and would like to patch your copy of that program but the article says to use DDT and the Save command, you are uncomfortable using DDT and the Save command.

I have come up against all of them, and I will tell you how they were solved, some using the program XAMN.COM which came with many CP/M Kaypros, and some with the program EDFILE.COM which is found on disk U1 or EDFILE2.COM which is found on disk U2 in the Boskug CP/M Public Domain Library. Boskug has XAMN.BAS on disks 10, 20 and 30.

### XAMN.COM

XAMN.COM is a program for looking at and changing data on a floppy disk. The source code for XAMN.COM is found in the file XAMM.BAS included with SBASIC which was bundled with some CP/M Kaypros. XAMM.BAS is written in SBASIC and must be compiled using SBASIC.COM to produce XAMM.COM. Both SBASIC.COM and XAMM.BAS are on the Kaypro CP/M disk. Boot up CP/M in drive A and type SBASIC XAMN.AAX. This instructs SBASIC to compile the file XAMN.BAS found on disk A, also put the resulting XAMN.COM on disk A, and list the program on the screen as it is being compiled.

To run XAMN.COM type XAMN followed by a return <RETURN>. The program will load and will display the prompt

Disk number (0,1,...,15) ?

Type the disk number (0 = A, 1 = B, 2 = C, 3 = 4) and press RETURN. The program will access the selected disk and display the following screen. (The disk statistics are shown for all three formats that may be encountered on a Kaypro with 5 1/4 inch disks. Notice that the disk statistics are shown both in decimal and hex format.)

Drive number	1	Current disk B:
Sectors/track	40	[0028] 40 [0028] 40 [0028]
Tracks/Disk	40	[0028] 79 [004F] 159 [009F]
Number of reserved tracks	1	[0001] 1 [0001] 2 [0002]
# of logical blocks	195	[00C3] 197 [00C5] 197 [00C5]
# of directory entries	64	[003F] 64 [003F] 96 [005F]
Block size	1024	[0400] 2048 [0800] 4096 [1000]
128 byte sectors/block	8	[0008] 16 [0010] 32 [0020]
Disk size in K	195	[00C3] 394 [018A] 788 [0314]

	Help
Examin a sector (physical)	1 A
Examin a sector (logical skew)	2 B
Move Sectors	3 C
Produce a map of a file	4 D
Produce a map of disk	5 E
Find bad sectors	6 F
Compute Block from Trk & Sec	7 G
Compute Trk & Sec from Block	8 H
Select disk	9 I

Please enter selection ==>

XAMN will only work with upper case letters so it would be wise to enable the CAPS LOCK KEY. Let's look at some of the disk problems which can be solved by XAMN.COM.

XAMN's option 1 lets you look at data beginning with the track

and sector that you specify. It can be used to recreate a directory entry. Typing a 1 gives you the following prompt:

Track, sectr?

The track and sector are entered with the comma as the delimiter. The data in the sector will be displayed, and the following options displayed:

(F)orward, (B)ackward, (R)ange, (C)hange, (E)xit?

To change a file name or extension select the track and sector on which the directory starts. For Kaypro SSDD and DSDD disks the directory starts on track 1, sector 1. (If you would like more information about the organization of CP/M Kaypro floppy disks, see the sidebar "How They're Laid Out.") The first four files and their allocation blocks will be shown. If the filename desired is not shown, press F to display the next sector. When the desired filename is shown press C. You are now in the edit mode with the first byte of the sector displayed. Continued pressing of the RETURN key will step through the sector a byte at a time, displaying the data in the byte. When the byte to be changed is shown, enter the data in hex (see the ASCII chart on page 57 of the Kaypro Users Guide). Pressing BACK SPACE will allow you to look at the previous byte. When any changes to the sector are complete, entering a . (a period) will terminate the change mode. The sector will be displayed with any changes made, along with the following menu:

(W)rite to disk, (C)hange more bytes, (A)bort?

Be careful here. Choosing the W option does not actually write the changed sector to disk until you go from the real Kaypro disk sector of 512 bytes to the next 512 byte sector. Enter F until the disk drive spins. Also, if the disk is write protected the data will not be written to the disk, and you will not be warned.

XAMN's option 6 is a check of designated tracks on the disk. It is useful for recovering information languishing in bad sectors. When invoked by typing 6 you will be prompted:

Starting track, last track ?

When you enter the number of the starting and ending track (separated by a comma) the sectors are checked, and any bad sectors will be displayed on the screen. A bad sector or sectors may be corrected by moving the data on the affected tracks to unused tracks, exiting XAMN and using COPY or the equivalent to format the bad track(s), reentering XAMN, and, finally, moving the data back to the source track(s).

Now we come to the problem that every computer user dreads - the directory of your WordStar text disk containing three chapters of your latest novel has been trashed.

We can use XAMN in conjunction with WordStar to reconstruct any of the files for which the text remains on the disk.

Before beginning the recovery procedure, use the image option of the COPY program to write the contents of the damaged disk to another disk. This gives you a backup disk should anything go wrong during the recovery procedure. Also, format a disk and copy the files XAMN.COM, WS.COM, WSMSSGS.OVR and WSOVLY1.OVR to it. This allows WordStar to store its temporary files on a disk other than the one whose directory we are going to recover by using the WordStar option to edit a file on one disk and store the temporary files and the updated file on another disk.

Put the disk with XAMN and the WordStar files in drive A and the disk with the damaged directory in drive B. Invoke XAMN to select disk B, and use selection 1 to search the disk for text. Start with the first track and sector that normally contains text (track 1, sector 33 on SSDD and DSDD disks, track 2 sector 33 on QD disks).

Continued on page 12

## Utilities (continued from page 11)

Step through the sectors until you find text (using the R command with a range of 40 works best). When you see text make a note of the starting track and sector. The quickest way is to look at sector 1 at 10 track intervals, and when the data is all E5's in the sector look further on the track for text. If text is not found on the track then you are beyond the data area of the disk and you should go back 5 tracks and search for text in sector 1 of that track. If text is found go forward 2 or three tracks and look for text. If text is not found look further on the track. If text is not found go back 2 or 3 tracks and look for text. The idea is to find the last track and the sector on that track containing text. Make a note of this track and sector number (this sector should have one or more end of file markers (1AH) at its end).

Now use XAMN'S option 7 to find the starting and ending blocks from the corresponding track and sectors. Make a note of these blocks.

Using option 1, examine the first directory sector. Build a directory entry using the filename F1 assigning blocks in sequence until all blocks are assigned. Several directory entries likely will be needed. Write the changes to the disk and exit XAMN by typing ^C. Now enter WordStar and use the D command to edit the file. When prompted for a file name type

B: F1 A-<CR>

This command will write any temporary text files created by WordStar to the disk in drive A. Now go to the end of the file by typing ^QC, and use ^OP to turn off the page display. The file length in bytes to the end of file marker will be shown. Make a note of this number. Exit WordStar by using the command ^KQ. Divide the number of bytes shown in the file by 128 to get the number of sectors in the file. Divide the number of sectors by the number of sectors per block to get the number of blocks in the file. Add this number to the starting block to get the ending block number.

Enter XAMN and edit the directory entry for file F1 to assign only the blocks between the starting and ending block to the file F1. Create a directory entry for a file F2 and assign all the remaining blocks to it.

Exit XAMN and enter WordStar. Now use the D command to edit the file. Again, when prompted for the filename type

B: F2 A:

Go to the end to get the length. As described above, determine

the number of sectors and blocks in the file and edit the file directory accordingly, creating the file F3 to accommodate the remaining blocks. Repeat this procedure until all blocks are assigned to a file. You may now edit and rename the files at your pleasure. Note that because disk A is used to hold WordStar's temporary files a full or nearly full disk can be recovered.

The program DUU.COM, which is found along with associated utilities on Boskug 103 may be used in the same manner as outlined for XAMN. In fact, DUU has a better user interface than XAMN. The documentation files for DUU are found on Boskug 104 and 105.

EDFILE is a public domain utility which allows display and editing of data in files.

Some of EDFILE's features are:

- Hex and ASCII display of record data.
- Screen editing of selected record.
- Hex or ASCII input when editing file records.
- Fully programmable cursor control.
- Powerful file search capabilities.
- Forward and backward scrolling.
- Address and/or record number referencing.
- Decimal or Hex number inputs.
- Disk reset on input (prevents Disk R/O error).
- Full online abbreviated help and expanded help menus.

To run EDFILE, simply type EDFILE followed by the name of the file you wish to dump and/or examine. EDFILE automatically sets the offset to 100h when editing COM files. The offset can be changed by typing 'O' at the command level and entering the desired offset. Should you have a text file corrupted with non-text characters, type EDFILE FILENAME to invoke the file. When EDFILE is loaded, typing O 0 will set the offset to 0, then a B to dump at the beginning. If the ASCII display looks correct enter + to advance to the next record. To enter edit mode enter E. You may now toggle between the ASCII and hex data fields using ^E, entering data in either format. You move around the data record with the arrow keys. ^W will flush the record to disk, which you should do before leaving the edit mode with ^X. The doc file supplied with EDFILE is well written. Using EDFILE is the solution to salvaging a file corrupted by non-text characters and to patching a file without using DDT and the save command.

For further information see the articles by Ted Silveria called "DU to the Rescue" in the September and October 1985 issues of Profiles magazine.

*David Veinot is Boskug's CP/M public domain librarian and a professional programmer by trade.*

## How They're Laid Out: Organization of Kaypro Floppy Disks

Kaypro CP/M floppy disks come in three formats: single sided double density (SSDD), double sided double density (DSDD), and quad density (QD). In all three formats numbering of the tracks starts with track 0, and sectors start with sector 1. The CP/M operating system is contained on the first track, and in sectors 17 through 32 of the second track. The directory is contained in sectors 1 through 16 of track 1 for both SSDD and DSDD disks, and on track 2, sectors 1 through 32 for QD disks.

The smallest allocation unit that a CP/M file can have is called a block. A block is 1048 bytes in length (8 128 byte sectors) for SSDD disks, 2048 bytes in length (16 128 byte sectors) for DSDD disks and 4096 bytes in length (32 128 byte sectors) for QD disks. Blocks are numbered beginning with 0 and start at track 1, sector 1 for SSDD and DSDD disks, and track 2, sector 1 for QD disks. Actual program or data storage starts with block 4 on SSDD disks, block 2 for DSDD disks, and block 1 for QD disks.

One file directory entry consists of 32 bytes, organized as follows:

Byte 1 contains an E5 if the file has been erased or the directory entry

has never been used, otherwise the user number, 0 through 15H. Bytes 2 through 9 contain the filename, left justified and padded with spaces (the hex character 20) if the filename is less than 8 characters. Bytes 10 through 12 contain the filename extension, again left justified and padded with spaces if there is no extension or the extension is less than 3 characters.

Byte 13 contains the extent number.

Bytes 14 and 15 are normally 00H.

Byte 16, count of 128 byte records (or sectors) controlled by this extent.

Bytes 17 through 32 list of allocation block numbers (00H if unused). One file directory can reference up to 16 blocks and each directory entry can refer to a maximum of 16K for SSDD disks, 32K for DSDD, or 64K for QD disks. Each extent in the directory of SSDD disks needs a separate entry, while a DSDD directory entry accommodates two extents, and a QD entry takes four extents. Byte 16 of DS and QD disks shows the number of 128 bytes in the last extent.

## SuperSort (continued from page 10)

This is all you need to know to use SuperSort to speed file maintenance after having added/deleted/changed records in a DataStar file. But there still are two more things you can do to accelerate the process. One automates the running of a SuperSort command line. The other automatically runs the sort and indexing function in proper sequence. The latter combines two tasks into one function.

You'll want to automate the SuperSort command line. It can be tedious continually typing those long SORT commands. It becomes even more burdensome when you commit a typo and the program aborts, requiring rekeying the entire line again. SORT solves this irksome problem with a built-in macro capability. You write the command line once and save it, calling it up from within SORT whenever you want it used.

In this case we are referring to that portion of the command line that does not include the name of the SORT program. So it is everything after the word SORT.

Using a text editor such as WordStar, write the SORT command line for sorting a file. Save it. Then do the same for indexing its file. To keep them straight, I would suggest renaming them FIRST.CF (the sorting command line) and SECOND.CF (indexing command line). Now running SuperSort involves only a short, three-part command line;

```
SORT CF <FILENAME> <CR>
```

Looking at the command line's three parts, we see the name of the program first (that's why we don't need it in the macro). Next is the trigger that tells SuperSort that a command line macro is coming for execution. It simply is "CF" (command file). <FILENAME> is the name you gave to your command file macro. In our example, we called them FIRST.CF and SECOND.CF. Running **SORT CF FIRST.CF** executes the sorting routine. Then running **SORT CF SECOND.CF**, prepares the index file.

But between running these two macros you still have to delete an old file and rename a new one. That will have to be done manually, or you can automate the entire process, including running

## Panasonic KX-P 1092i (Continued from page 4)

about \$9-\$10. Their rated life is 3,000,000 characters. I have just retired my first one because it was getting somewhat faint in draft mode although it is still dark enough in NLQ. I estimate that it was used for about 2,000,000 characters, give or take about 500,000, so I believe the rating is honest.

One may ask about using generic ribbons. I am inclined to stick with the genuine article for four reasons. In the first place, a serviceman told me that in his experience generic ribbons don't always work satisfactorily in Panasonic printers. Secondly, Panasonic cartridges have an ink reservoir which the user opens when required, approximately doubling the life of the ribbon. Some generic ribbons have no reservoir; unless such generics cost less than half of Panasonic's price, their use would provide no saving. In the third place, my previous printer's printhead wore out prematurely, apparently because I used non-approved ribbons. And finally, Panasonic's two-year warranty is conditional on use of their own ribbons.

The Panasonic 1092i typically sells for 10-15% less than the Epson FX-86e. Surprisingly, the prices on both of these Japanese-made printers showed a drop of about 10% in the spring of 1987, almost exactly when the dollar reached its lowest point in its slide

the two macros. Here's the batch file that will do this (type it using WordStar's non-document mode or any editor producing ASCII text);

```
SORT CF FIRST.CF  
ERA <OLDDATA FILE>  
REN <OLDDATA FILE NAME=NEW DATA FILE NAME>  
SORT CF SECOND.CF
```

Let's call our batch file SORT.SUB (all CP/M batch files must end with the suffix "SUB"). Using our earlier examples, it would look like this;

```
SORT CF FIRST.CF  
ERA MYFILE.DTA  
REN MYFILE.DTA=MY.DTA  
SORT CF SECOND.CF
```

Of course, in order to run this as it's written, you need SORT.COM and the other files on the same drive. If they aren't, then amend the .SUB file accordingly to tell the operating system where to find SORT.COM and the other files. If SORT.COM is on A:, and you're logged onto B: where the other files are, then your .SUB file would now look like this;

```
A:SORT CF FIRST.CF  
ERA MYFILE.DTA  
REN MYFILE.DTA=MY.DTA  
A:SORT CF SECOND.CF
```

You'd use SUBMIT.COM, EX.COM or any similar batch processing program to execute your .SUB file. Type (if using SUBMIT.COM)

```
SUBMIT SORT <CR>
```

If your .SUB file is on B: and SUBMIT.COM is on A:, where you are logged, then type

```
SUBMIT B:SORt <CR>
```

That's it. Now after you have finished changing DataStar files, simply exit DataStar and run SORT.SUB to conduct a file maintenance that is 85% faster for file sorting and index file-making than using DataStar.

Additional measures may have to be taken under certain specialized conditions when using SuperSort to maintain InfoStar/DataStar files. These are indicated in Appendix D of the Kaypro version of the SuperSort manual.

*Hal Vogel teaches at New Jersey's Glasboro State College where he happily surrounded by CP/M-flavored Kaypros.*

against the yen. I haven't ever figured this one out, but I'm not complaining!

My three nearest Panasonic dealers are each about 150 miles away. Although a number of dealers in my area offered to order a 1092i for me, none was willing to get one for me to look at first or even try to get me a copy of a Panasonic printer brochure. I obtained Panasonic's brochure myself by calling their toll-free number (800-PIC-8086). In June I ordered my 1092i by phone from 47th St. Photo in New York (800-221-7774) for \$289 plus shipping. I have been completely satisfied with their service in every way. Since then, I have seen an ad in Byte offering this printer for a price as low as \$264.95 plus shipping.

If you don't need reverse paper feed and can tolerate a speed of only 160 characters/second and space for only 40 downloaded characters, check Panasonic's KX-P1091i. It seems to have the same fonts and pitches as the 1092i, and is claimed to be compatible with the Epson RX-80 and the IBM Proprinter. Ads in the current issue of Byte offer it for \$154.95 and up.

*Mel Halbert is a nuclear physicist at Oak Ridge National Lab. His computer is a Kaypro 8 with two quad density drives replacing one of the original full height drives. He has thus far resisted joining a son in Amigaland.*

## WordStar (continued from page 1)

find all the user area addresses in the file PATCH.LST on your master disk set. Once you have set up your own patch files, you can auto-patch your customizations through an auto patch feature in WSCHANGE.

I'll cover the rest of the improvements in two groups: enhancements to NewWord; and enhancements to WordStar 3.3.

### NewWord Improvements

Most of the changes in WordStar 4 already exist in NewWord, but there are a few new ones:

- Shorthand, a relatively easy to use built-in limited macro capability. It's not as powerful as Smartkey or XtraKey, but it is built-in, which makes it easier to learn and use and it doesn't take up as much additional disk space as the other programs (a serious consideration on SS/DD Kaypro II's). With WSCHANGE, you can set the size of the Shorthand file to suit your use, but the larger you make it, the more RAM it will use, limiting your use of other overlays and the size of the document file you can edit.
- I found Shorthand too limited to handle the macros I had created with Smartkey, but I was able to use the Smartkey files I had created for WS 3.3/NewWord intact.
- Math capability in the form of a four-function (+ - X /) on-screen calculator. It works in-line in block mode or as separate calculator appearing in the menu window in the top third of the screen.
- Indexing and Table of Contents support. Both are nice, if you use them, but, alas, still no footnote capability.
- Proportional spacing. It now officially supports proportional spacing (are you listening Dave Presberg?). It even allows you to set up different justification tables to use with different documents.
- The Word Plus. A real spelling checker. NewWord had no built-in spelling checker; WS 3.3 came with SpellStar, which amounted to the same thing.
- Several new dot commands provide you greater flexibility. There are commands to change your user-assigned printer functions "on-the-fly," turn letter quality or proportion spacing on/off, control left/right margins, and set paragraph indents and wraps.
- More extensive printer support — including laser printers.

## Meeting notes (continued from page 2)

Dbase and Perfect Filer. Get your database problem solved for free. (Members with questions can also call Mike (993-0156) or leave a message on the board.)

Customer support: Nat Weiner reports that SSI (makers of Wordperfect) offers free, fast, unlimited support, on an 800-number. They have made at least six return phone calls to solve his problems using a strange combination of hardware; even getting identical equipment themselves to make sure it works.

Preliminary evaluations of Wordstar 4: Alan Campbell and Al Chapman say the new version is even slower (accesses disk more often in scrolling through files) and, including overlays, requires more disk space and RAM.

Program: Bob Waters explained how to organize an MS-DOS hard disk using batch files (cheaper and more flexible than shell programs) to create a custom menu; disk-optimizer to store files more efficiently; and disk-caching software to speed up disk i/o. Names were named, details were given, questions were answered.

Also the ability to configure one copy of WS for multiple printers, eliminating the need to have a different working copy of WordStar configured for each printer.

### WordStar 3.3 Improvements

For those of you still using WordStar 3.3 or earlier, you're going to think you died and went to heaven. The improvements are that numerous.

- Undelete. That's right, folks, an honest-to-God unerase feature that recalls your last delete.
- Embedded rulers. The ability to embed ruler lines that stay with the document — more than one, if you wish. No more calling up the document and trying to remember where the margins and indents were so you can reset them before you accidentally reformat the whole damn file.
- Multiple copy printing. Used to be the only way to get WordStar to print a document more than once was to use MailMerge (if you had it) or sit there and wait until it printed once, then punch it out again...and again. No more. Now you can tell it how many copies you want (just like a real computer), and go for pizza while it prints.
- Continuous underline. No more having to lie to the program by sticking underlines between words to give the appearance of continuous underlining. It's now a real option.
- Ability to turn off the backup file feature so that the program doesn't automatically create a BAK file every time you save.
- User number support. Particularly useful on hard disks.
- On screen display of bold and underlined text (only on '84 Kaypros and later).
- Multiple-line headers and footers. You can now have up to three header or footer lines in a document.
- A Go-to-page command. 'Nough said.
- Run a program. You can now interrupt WordStar and run another CP/M program from within a document. On prior WS releases you could only Run a program from the main menu.
- Built-in Mailmerge. If you have MailMerge, the difference is transparent. If you never acquired it, it adds to your capability to do merge printing, form letters, etc. Don't even consider it for database applications — it far too limited and restrictive.

Just think, if you had been using NewWord, you would have

Continued on page 15

## Classifieds

**Wanted:** Donated computer for nonprofit organization. Need a Kaypro compatible with a Kaypro 4-84. Call Biblical Training Center, ask for Laurie Braaten. 324-4230 (W), 321-7638 (H)

**For Sale:** Morrow MD3. 2 360K drives. CP/M, NewWord, Personal Pearl database, Logicalc, BASIC, and other software. Silver Reed letter quality printer with extra ribbons. \$500. Also 1200 baud Anchor Automation Modem \$75. Call Joel 552-8801 (D), 331-2027 (E)

**For Sale:** Kaypro 4-84 with modem, Juki printer, cable, software, and computer stand. \$1000 or best offer. Call Bill at (401) 277-6537 (D), (401) 333-5521 (E)

### The Third Time (continued from page 3)

Late in November of 1985, less than twenty months after I bought my Kaypro, I bought a Leading Edge M, and entered the world of DOS and the world of "open architecture". Open architecture, as used here, means simply that the machine can be easily changed or expanded by changing or adding plug-in components. Whereas the Kaypro was not an easy machine to change, my Leading Edge was very easy to change, and as better and cheaper improvements and expansions became available, I made substantial changes, replacing the monochrome screen adapter with one capable of doing graphics, replacing the keyboard with its abominable layout, adding memory to bring the system up to 640 k, replacing the 10 meg hard disk with one that had a 30 meg capacity and was also faster, and adding an internal 2400 baud modem. The most complicated tool needed to make these changes was a Phillips screwdriver. Never was a soldering iron touched.

The fierce competition to satisfy the huge market in DOS upgrades made for a large selection of products, generally well designed and of high quality, and attractive prices. With easy installation, labor charges were nil.

The M, like the Kaypro before it, was a great success. It made available to me outstanding software, programs like Word Perfect, Keyworks, and the like which are vastly superior to anything available in CP/M. It gave me capacity to handle databases too large to manage on a floppy system. It was pleasant to use and trouble free. But for a "bargain" which proved irresistible to one with my flaws of character, I would still be happy with the M today.

My third cycle, which began in July of this year was much different than either of the first two. In this cycle, which has not yet run its course, I replaced both my computer and my printer.

### WordStar (continued from page 14)

had all these features three years ago.

#### Boos!

There are some minor annoyances:

- In default mode, the DEL key deletes the character it's on instead of the one to the left; the BACKSPACE key deletes to left instead of simply backspacing. I wasn't used to this. Both can be changed with WSCHANGE to perform "normal" functions.
- Block Moves have a tricky little catch. After you've completed a block function (move, copy, delete) and hidden the block markers (^KH) the next time you enter ^KB to start defining a new block, the old ^KK automatically reappears at its last spot. If you forget to set ^KK your block activity will be on a block you don't want. This was also true in NEWWORD, but not WS 3.3.

More importantly, there are some major drawbacks:

- WordStar 4 can be a memory-hungry program if you try to configure it for maximum use of all its added functions (Short-hand, Index, Table of Contents) or more than one printer (or a laser printer). Additionally, RAM-resident programs, such as Smartkey or Xtrakey, reduce the amount of working memory available. You will get a "Low Memory" message telling you there is not enough memory left to do what ever it is you want to do. The solution is to set the minimum memory configuration (in WSCHANGE), but that means you can't use all of WS added features at the same time.
- Changing the spell checker to The Word Plus has its price. While you now have the Cadillac (Porsche?) of CP/M spellers at

The printer, a Hewlett Packard LaserJet II was the major purchase in terms of both cost and import. The computer was more of a "bargain I couldn't resist", or as I sometimes call it, my scrounge machine.

The Okidata 93 printer purchased in 1983 served me faithfully for over four years. It was noisy, inflexible and, in truth, calling its output "near letter quality" was an exercise in hyperbole. Although it represented an acceptable and practical solution, it was not an ultimate answer to my printing needs.

The early laser printers were fast, had excellent type, and certain types of flexibility. They were also expensive, miserable to use, and in some crucial ways, fatally inflexible. Like the early Macintosh computers, they were a wonderful idea, poorly executed. Even so, I found myself doing more and more of my professional work on a LaserJet printer owned by some associates.

The LaserJet II, introduced this spring, is something else. Although still quite expensive, with a list price of \$2,595, the LJ II is a very good product, fast, flexible, capable of outstanding output, eminently usable today, and capable of great growth over what should be a fairly long useful life cycle. What's more, the standard for laser printers has been set, and the LJ II is it. Finally, although there are many other good laser printers priced less than the LJ II, the real-market price premium for the LJ II is not very much. In short, the LJ II may well be the first truly good computer printer.

Even though my volume is limited, I need a good printer, one was finally available, expensive but affordable. I bought it. So far I'm glad I did.

The computer is something else. The machine is an AT clone, i.e., an 80286 machine. It is a Leading Edge MH which, like my earlier M, was also made for Leading Edge by Mitsubishi, but this

Continued on page 16

your fingertips, you lose the ability to check words in-line. You must close your document and go back to the WordStar menu to run the spell checker. WordStar hackers had learned long ago how to patch Word Plus to WordStar 3.3 with that limitation, I would have expected MicroPro to do it right — allowing us to use the program in-line.

While we're on the subject, The Word Plus packaged with WS 4 (1.21) is an older version. If you have a more recent version, you can exchange the MAIN.DICT.CMP file; it will run fine. You can also carry over any supplemental dictionaries you've already created.

- If you have Mailmerge files you plan to carry over, be careful. There are changes in the Mailmerge dot commands that could mishandle your old Mailmerge files. The old .EF, .EX, .AND and .OR commands no longer work, and your old .IF commands will do strange things. Also, some new dot commands have been added.

#### Conclusion

If you are running WordStar 3.3 or earlier, the upgrade is absolutely worthwhile — I would even say "a must." If you are running NewWord 2.0 or later, your decision to upgrade depends on how much value you place on math, spell checking, shorthand, indexing and laser printer support — the rest you already have.

*Alan Chapman abandoned WordStar for WordPerfect; therefore his comments on WordStar 4 should be taken with a grain of salt or low-sodium substitute.*

## The Third Time (continued from page 15)

time the fact that it is a Leading Edge machine had virtually nothing to do with the purchase. In fact the relationship between Leading Edge and Mitsubishi has long since dissolved in a spate of lawsuits, and very few MH's were ever sold.

What I bought was a "demo" at a dealer's "tent sale". All I bought was the computer, no keyboard, no monitor, no monitor board. That is not to say it was totally naked. There is a meg of ram on the motherboard, two serial ports, a parallel port, a clock, a 1.2 meg floppy that reads and writes 360k disks as well, a built in floppy controller, and a very good hard disk controller. In addition, the machine had a perfectly good Seagate 225 20 meg hard disk, a nice drive but too slow and small for an AT type machine, and already replaced with a high speed 43 meg drive, bought used at a bargain price from someone who needed 80 megs of disk space. There is expansion space galore, nine slots, room for up to five half height drives, and a 200 watt power supply. All this for \$650.

I've learned a few lesson with this machine. Unlike the previous machine, there are compatibility issues. The keyboard I bought to upgrade my earlier machine did not work because it was not the proper AT type, even though the keyboard layout was the AT type. This problem was nicely solved when I picked up a pristine genuine IBM "enhanced" keyboard at a bargain price at a salvage store. (The layout, with the function keys at the top, takes getting used to, but I gotta confess, the famous IBM feel really is nice.) In addition, my monitor board and my bargain 2400 baud modem, both of which worked perfectly in my slower machine, are usable but not fully functional in the faster computer. Finally, a couple of software programs, mainly in the communications area, have troubles. Although hardly overwhelming, these problems serve as a reminder that, as manufacturers strive to increase performance above the basic standard, compatibility problems that once were considered solved are beginning to reoccur.

My new computer is a hummer, not the fastest, but very quick nevertheless. A 2,500 record DBase III file with 15 fields sorts on 10 variables in less than a minute. I could not have handled that

database at all on my Kaypro.

My new computer almost certainly is not done growing. Megs of addressable memory, new color and graphics, new high speed modems and new back-up devices are all on the near horizon, existing and soon to be economically available. Even so, and even assuming that these things are installed, the most interesting thing about my new machine is that, unlike the Kaypro, which really changed the way I work, and the first Leading Edge, which made valuable new things possible, this computer, although a super-machine by comparison, changes nothing of true significance. It is faster, more convenient, and more pleasant to use but, in truth, it runs the same software and does the same things as its predecessor. That may change but for now I've mentally chalked the printer up as a business expense while the computer falls into the gratification category along with the Dodge hemi-header and Corvair turbos I once owned.

A couple of last thoughts. As I come up to the five year mark in computing, it is clear the machine has made dramatic changes in the way I work and enabled me to accomplish things that otherwise may well not have been possible. Each of my "equipment cycles" has produced real benefits. Still, the major leap was in the first cycle, getting a computer. In proportion the benefits from the second and third cycle, although real, have been much less, despite my increase in machine sophistication and decrease of fear of the unknown mysteries that lie within the innards of the electronic marvel.

As I look ahead, I see machines that will make our present ones look primitive by comparison, and I look forward to the change. Still there is the nagging feeling that for many of us, including me, much of what lies ahead may be change for the sake of change rather than real progress in terms of real productivity.

Today's cars are the best the world has ever seen. Even so, they won't get you or me through downtown Boston any quicker than my first car could, a 1933 Chevy, which represented a major change from animal transportation.

*Nat Weiner is obviously a long time Boskug member. He answers spreadsheet and DOS related questions for the group when he is not giving interviews for the Boston Globe sports pages.*



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